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October 26, 2009

Brad Hubbard
U.S. Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95821

Subject: Comments to Draft Issue Papers for Water Transfers

Dear Mr. Hubbard:

The purpose of this letter is to provide our comments and questions relative to the draft issue papers developed by the Department of Water Resources (DWR) and the U.S. Bureau of Reclamation (Reclamation). We have consolidated our comments in reference to both a water transfer program for 2010 and a future water transfer program. In addition, we have identified other issues that we believe should be evaluated and considered for both programs.

It is important that DWR and Reclamation continue to recognize the need or benefits in providing simplified rules and guidelines to arrive at an effective implementable water transfer program. The key issue that DWR and Reclamation are attempting to address is the avoidance of third party impacts as a result of a water transfer program. DWR and Reclamation must balance this responsibility with not overburdening the transferor or transferee and causing the potential water transfer programs to collapse as a result of excessive administrative requirements. We believe it would be wise to consider allowing the issue of price between the buyer and seller, and the ability of the projects to control the system, to address many of these issues. With this in mind, the following are our comments and questions.

Issue #1 – Rice Water Transfer Pattern

- Use of ETAW as the transferable quantity made available through idling provides a conservative estimate of the actual water made available for transfer because the following are not accounted for:
 - Reduction in conveyance system losses from the point of diversion to the idled field, and other losses
 - Reduced deep percolation

- We concur that if DWR and Reclamation believe it is important to modify the pattern by which ETAW of rice is available, more time and research needs to take place. The inability or uncertainty to export any water savings in the May and June time periods makes the detailed discussion of the precise pattern of less significance.

Issue #2 – Evapotranspiration Pattern of Applied Water Values

- DWR staff involved with CIMIS may have a significant amount of information readily available relative to ETAW to aid in understanding patterns of various crops.
- In addition to the crops listed in the draft Water Transfer Guidelines, numerous other crops are produced, which could be idled/shifted for a potential water transfer; and thus, we suggest gathering data to support involvement of other crops.
- It should be remembered that ETAW values are averages; and in the past, water transfers have occurred in drier years when the ETAW may actually be higher than the average.

Issue #3 & 4 – Delta/Yolo Bypass Transfers

- Consider partnerships with potential sellers to develop a monitoring plan to document the existence of hydraulic connectivity from the Knights Landing Ridge Cut downstream to the Delta.
- Consider how to incorporate these transfers with Delta water compliance issues.

Issue #5a – Alfalfa Idling

- Research dormancy of alfalfa without irrigation, as may be available from technical publications and other water transfer programs.
- Consider whether contractual arrangements or any other arrangement would facilitate participation by idling pasture.

Issue #5b – Pasture Idling

- Consider whether contractual arrangements or any other arrangement would facilitate participation by idling alfalfa.
- Consider a pilot study to evaluate the effectiveness of a water transfer involving pasture.

Issue #6 – Weed Control on Idled Rice Lands

The size of a field potentially eligible to participate due to seepage will be difficult to define and needs further discussion.

- Winter crops grown should have no influence on the eligibility of a grower to participate in a water transfer.
- The ETAW includes the portion of evapotranspiration by the crop from applied irrigation water. ETAW does not include the portion of evapotranspiration of the crop from soil moisture depletion. Therefore, the soil moisture depletion that may occur from an idled field should not affect the quantity of water transferred, which is based on the average ETAW.

Issue #7 – Rice Straw Decomposition Water

- As identified, there may be a quantity of water potentially transferable due to savings of consumptive use. The draft Issue Paper identifies that a determination will be made by Jun 15, 2010 as to whether this a potential option for a water transfer program during 2010. We suggest that this date be earlier in the year to accommodate that: 1) the environmental documentation must include this option and 2) potential sellers submit a single petition for transfer to the Division for the entire season.
- We suggest DWR and Reclamation consider whether there are other benefits from not applying water for rice decomposition. Other benefits could be to water quality or timing the diversion to coincide with excess Delta conditions.

Issue #8 – Establishing a Baseline for Determining Transferable Water Amounts When Contract Deliveries are Cut

- This issue needs to address separately between State Water Contractors and Central Valley Project Contractors.
- We suggest a review of past practice on this issue and the potential need to address on an individual contractor basis.

Issue #9 & 10 – Streamflow Depletion Due to Groundwater Pumping/Well Review

- Where are the areas that hydrologic models exist? Which models are referred to as having been “set up in consultation with” DWR and Reclamation staff?

- What assurances exist to ensure that the model closely approximates actual interaction of surface water and groundwater? Have the models been peer reviewed? Who will operate the model; and who will verify the results?
- Relative to the use of a groundwater model, how will the process to evaluate a project be implemented? In other words, is there sufficient time available to develop and complete a model run, discuss and evaluate the results, complete negotiation of an agreement, petition for and receive approval from the Division, and other processes? In the case that one or more parties requires a project be modified, how will this be accomplished?
- Where hydrologic models are available, will the EWA well criteria continue to be applied for initial qualification of groundwater wells, or will any groundwater well be qualified for participation in a transfer (with an associated modeled depletion loss factor)?
- Groundwater wells approved for use in the 2009 DWB should be eligible to participate in water transfer programs without the need for re-examination of the groundwater well log.
- As identified in the recommendations for 2010, the draft Issue Paper states “Where monitoring and modeling information is not available...” the EWA well criteria is to be applied and an assumed depletion factor of 12% will apply. What is meant by cases where “monitoring” information is not available?
- In the cases where additional data may be available (i.e., groundwater quality data, groundwater level data, etc.), how will this information be considered in the development of an assumed depletion loss?

Issue #11 – Estimating Groundwater Substitution Baseline Pumping

- For a water transfer program during 2010, the baseline groundwater pumping for participants involved in the 2009 DWB should be based on baseline quantities determined during 2008; and for all others, baseline pumping quantities should be based on 2009 groundwater pumping.
- Specifically define “all wells they control within a contiguous water supply delivery system.” How is this definition different for individual entities as compared with a water district?
- Will all groundwater wells included in the evaluation of the baseline groundwater pumping quantity need to be configured in accordance with the specifications referred to in draft Issue Paper #12?

Issue #12 – Measuring Well Output

- Proper installation of flow meters should follow manufacturer's specifications or guidelines identified by other knowledgeable resources (i.e., Cal Poly Irrigation Training and Research Center, USDA Agricultural Research Service, Reclamation Water Measurement Manual, etc.).
- Certification of a flow meter installation should be required only once at a particular groundwater well (i.e., not annually), unless the participant identifies that the configurations have been modified.
- What will the requirements be relative to field calibration of flow meters?

Issue #13 – Diesel-Powered Groundwater Pumps

- The thresholds by which different regulatory approvals would be necessary should be discussed with, and identified by, the appropriate air quality regulatory agencies.
- Credit should be given for water users that exchange diversions of surface water using diesel engines for groundwater pumping using diesel engines.

Issue #14 – Groundwater Level Monitoring

- We are concerned with the level of required monitoring and the associated costs.

Issue #15 – Land Subsidence Monitoring

- We are concerned with the level of required monitoring and the associated costs.

Issue #16 – Water Quality Monitoring

- We are concerned with the level of required monitoring and the associated costs.

Other Issues

1. Temporary Storage of Water from Idling Programs: We believe this is a critical issue as there is a significant quantity of water potentially available from water users along the Sacramento River that is currently unavailable due to the inability to move water when the Delta is in excess or when pumping restrictions are in place. Other operating criteria have minimized the ability to temporarily store water in Shasta Lake. Opportunities to

overcome this issue should be a top priority. Overcoming this issue will require creative thinking by all parties, including staff of Reclamation, DWR, DFG, USF&WS, and the Division, as well as potential buyers and sellers.

2. Forbearance: The option for a forbearance type agreement should be further evaluate. Water users would elect not to divert surface water and allow this water to be picked up under Reclamation's or DWR's water rights.
3. Future and Long Term Transfers: Discussions relative to issues not addressed for 2010 should begin soon. Unresolved issues should be settled well in advance of any transfer contemplated for 2011 and beyond.

Please call if you have any questions or require additional information.

Sincerely,
MBK ENGINEERS



Marc Van Camp